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JFW

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of : West  
Serial No. : 10/055,085  
Filed : January 25, 2002  
Group Art Unit: 3752  
Examiner: Robin Octavia Evans  
For : APPARATUS FOR APPLYING FOAM MATERIAL TO A SUBSTRATE  
Attorney Docket : XEEE 2 13215

Board of Patent Appeals and Interferences  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**TRANSMITTAL OF AMENDED BRIEF OF APPELLANT**


Dear Sir:

In compliance with the Notification of Non-Compliant Appeal Brief mailed June 20, 2005, enclosed is an AMENDED APPEAL BRIEF, in triplicate.

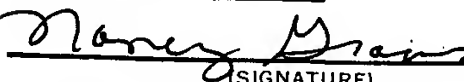
The Commissioner is hereby authorized to charge any fees which may be required to Deposit Account No. 06-0308.

Respectfully submitted,

FAY, SHARPE, FAGAN,  
MINNICH & McKEE, LLP

  
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on 07-11-05

  
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Nancy Grams



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of: West

Application No.: 10/055,085

Examiner: Robin Octavia Evans

Filed: January 25, 2002

Docket No.: XEEE 2 13215

For: Apparatus for Applying Foam Material to a Substrate

AMENDED BRIEF ON APPEAL

Appeal from Group 3752

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I. REAL PARTY IN INTEREST

The real party in interest for this appeal and the present application is inventor, Richard A. West. The present application is not assigned to, or subject of assignment to, any other party.

II. STATEMENT OF RELATED APPEALS AND INTERFERENCES

There are no prior or pending appeals, interferences or judicial proceedings, known to Appellant, Appellant's representative, or the Assignee, that may be related to, or which will directly affect or be directly affected by or have a bearing upon the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-29 are on appeal.

IV. STATUS OF AMENDMENTS

On November 1, 2004, appellant filed a Request for Reconsideration including appellant's Declaration Pursuant to 37 CFR § 1.132. By an Advisory Action dated December 1, 2004, appellant was advised that the Affidavit and Request for Reconsideration were considered by the examiner.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Referring to Figures 1-3 of the drawing and the specification at page 6, lines 8-19, and Figures 6-9 of the drawing and the specification at page 10, lines 13-18, appellant's apparatus as defined in claim 1 comprises depositing means in the form of a dispenser support and drive assembly 12 for depositing a layer of foamed plastic material PM on an underlying roof surface S along a path P having a beginning end P1 and an ending end P2. The apparatus further includes support

means in the form of a frame 10 having wheels 14 and 16 for supporting the dispenser support and drive assembly 12 for movement on underlying surface S along path P. The apparatus also includes moving means comprising a motor and gear reduction unit 26 which includes a variable speed electric motor 30 and which moving means is for moving the frame 10 and dispenser support and drive assembly 12 along path P.

Referring to Figures 1-3 and the specification at page 6, line 20 to page 8, line 4, dispenser support and drive assembly 12 includes a carriage 40 reciprocable in opposite directions transverse to direction A of the path. The carriage is driven along track members 42 by a threaded drive shaft 48 which is rotated by a carriage drive motor 50. The carriage carries a dispenser gun 62 having an outlet nozzle 64 by which foamed plastic material is discharged onto surface S. Referring to Figures 1, 4 and 5 and the specification at page 8, lines 5-20, control means 100 is provided for controlling, *inter alia*, drive motors 30 and 50. Referring to the specification at page 1, lines 8-16, the apparatus thus far described is known in the prior art.

With reference to Figures 4 and 5 of the drawing and the specification at page 8, line 21 to page 10, line 18, and Figures 6-9 of the drawing and the specification at page 10, lines 13-18, the present invention as defined in claim 1 provides an improvement in control means 100 comprising a programmable controller PC for controlling drive motor 30 and thus the moving means for varying the rate of movement of the frame 10 and dispenser support and drive assembly 12 along path P for a layer of foamed plastic material PM deposited on underlying surface S to slope uniformly relative thereto along at least a portion of path P between the

beginning end P1 and the ending end P2 thereof, as shown in Figures 6-9 of the drawing.

Referring to Figures 6-9 and the specification at page 10, lines 13-18, applicant's method as defined in claim 15 for applying a layer of formed plastic material PM on an underlying roof surface S along a path P having a beginning end P1 and an ending end P2 comprises depositing foamed plastic material PM on surface S in the direction from beginning end P1 toward ending end P2, and controlling the depositing of material for the deposited material to slope uniformly relative to surface S along at least a portion of path P between beginning end P1 and ending end P2.

As will be appreciated from the specification at page 8, line 21 to page 9, line 7, programmable inputs to the controller PC of base speed for the apparatus, the distance for a given run and slope parameters including minimum and maximum thickness of the deposited material provide the means for progressively changing the speed of motor 30 as recited in dependent claims 3 and 8, the means for selectively progressively increasing, decreasing and maintaining a uniform speed for motor 30 as recited in dependent claims 3 and 8, the means for selectively progressively increasing, decreasing and maintaining a uniform speed for motor 30 as recited in dependent claim 14, and the step of selectively controlling the depositing of material as recited in dependent claim 18.

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The following grounds of rejection are presented for review:

Claims 1-29 are rejected under 35 U.S.C. §102(b) as being anticipated by Hunter, Jr. (6,126,766).

VII. ARGUMENT

A. Claims 1 and 15

It is Appellant's contention that each of the independent claims 1 and 15 patentably distinguish under 35 U.S.C. §102(b) from Hunter, Jr. '766.

The patent to Hunter is a division of patent 6,024,147 to Hunter which is identified and discussed in appellant's specification at page 1, lines 8-16, and page 2 of the specification, lines 17-23. With reference to Figure 1 of the cited patent, the apparatus for depositing a layer of foamed plastic material on an underlying surface comprises a wheeled frame moveable along a path in the direction of arrow 33, and a rail assembly 23 which supports a spray nozzle 62 for displacement in opposite directions, as indicated by arrow 32, transverse to the path of movement of the vehicle 1 and as the vehicle moves along the latter path. For any given path of movement of the vehicle, the speed thereof is constant, whereby the deposited material is in a layer of uniform thickness along the path of movement and between the beginning and ending ends of the path. The ground speed of the vehicle can be adjusted with respect to successive passes to provide a terraced or step profile as shown in Figure 6 of the drawing and described in the specification at column 3, lines 63-67 and column 6, line 64 to column 7, line 10.

Appellant's invention as defined in each of the independent claims 1 and 15 relates to depositing a layer of foamed plastic material on an underlying surface and along a path having a beginning end and an ending end. In apparatus claim 1, the rate of movement of the foam depositing means is controlled for a layer of foamed plastic material deposited on the underlying surface "to slope uniformly relative thereto along at least a portion of said path between said beginning end and said

ending end." (Emphasis added). In method claim 15, the depositing of the foamed material is controlled for the deposited material "to slope uniformly relative to said surface along at least a portion of said path between said beginning end and said ending end." (Emphasis added). It is respectfully submitted that Hunter, Jr. '766 does not disclose either apparatus or a method for depositing material in the manner defined in claims 1 and 15, namely for the deposited material to slope uniformly along at least a portion of the path and in the direction between the beginning end and the ending end of the path.

As is clear from the disclosure of Hunter, Jr. '766 and paragraphs 4, 5 and 6 of appellant's Declaration filed November 1, 2004, the Hunter, Jr. apparatus moves along a path on an underlying roof surface at a ground speed which is constant between the beginning and ending ends of the path, whereby a layer of foamed plastic material of uniform thickness is deposited along the entire path. When it is desired to provide a slope on a flat roof, as shown in Figure 6 of Hunter, Jr. '766, the apparatus is shifted laterally in Figure 6, transverse to the path of movement of the apparatus, and the ground speed of the foam applicator is reduced on each successive pass away from and parallel to drain 96.

In paragraph 3 of the final rejection, the examiner asserts that Hunter, Jr. '766 discloses in column 5, lines 21-26, that the amount of product sprayed on the underlying surface for unit of sprayed area is set by selecting the ground speed of the vehicle. While this is true, it is without question that each run of the apparatus is at a constant ground speed, whereby the material deposited along the path of movement of the apparatus between the beginning and ending ends of each run is



of uniform thickness along the entire path and does not slope at all in the direction of the run and between the beginning and ending ends thereof.

The examiner further asserts in paragraph 3 of the final rejection, with reference to the limitation in appellant's claims 1 and 15 that the material is deposited on the underlying surface to slope uniformly relative to the surface along at least a portion of the path, that the Abstract of Hunter, Jr. '766 discloses a method for uniformly applying coatings at appropriate thickness and pitch upon a surface. It is respectfully submitted that this portion of the Abstract of Hunter, Jr. '766 is inappropriately taken out of context with the Abstract in its entirety and, moreover, has nothing to do whatsoever with the deposited material sloping uniformly relative to the underlying surface along a portion of the path between the beginning and ending ends thereof. Rather, the Abstract relates to the traveling disposition of the spray nozzle transverse to the direction of the path of movement of the apparatus and to the movement of the spray nozzle at each of the opposite ends of the transverse movement thereof to control the thickness of the foam at the latter ends.

Still further, the examiner asserts in paragraph 3, with respect to Figure 6 of Hunter, Jr. '766, that the latter shows the speed of the vehicle decreasing "...as it travels from point A to point E as described in column 7, lines 1-10. Since the vehicle does sweep back and forth with the boom changing directions and the flow rate remaining constant, the speed of the vehicle would inherently have to increase to obtain the same spray pattern on the subsequent sweep." To begin with, it is respectfully submitted that Hunter, Jr. '766 does not disclose that the vehicle moves along a path in the direction from point A to point E in Figure 6. Rather, as stated by Hunter, Jr. '766 in column 3 of the specification, lines 63-67, in column 7 of the

specification, lines 3-10, and in paragraph 5 of appellant's Declaration filed November 1, 2004, the Hunter, Jr. apparatus moves along each of the paths A-E perpendicular to the plane of the sheet on which Figure 6 appears, and the apparatus moves along each of the paths from its beginning end to its ending end at a constant speed. The speed is decreased for each of the paths B, C, D, and E relative to the speed along path A. Therefore, Hunter, Jr. '766 does not disclose the depositing of material such that the material slopes in the direction between the beginning and ending end of the path of movement of the apparatus, as is required in appellant's claims 1 and 15.

Importantly, even if it were to be considered that Hunter, Jr. '766 discloses the path of movement of his apparatus to be in the direction from point A to point E, it is respectfully submitted that each of the layers A-E would, in and of itself, represent a path of movement having a beginning end and an ending end. In this respect, layer A would be laid along a path having a beginning end adjacent drain 96 and an ending end adjacent the beginning end of layer B, and layer B would have an ending end adjacent the beginning end of layer C, and so forth. In accordance with the disclosure of Hunter, Jr. '766, the apparatus would move at a constant speed from the beginning end to the ending end of the path for laying layer A. The ground speed of the apparatus would then be adjusted to deposit the thickness of layer B and the apparatus would move at a constant speed from the beginning end to the ending end of the path for depositing layer B. Therefore, such movement of the apparatus of Hunter, Jr. '766, in accordance with the disclosure of the latter, would successively deposit layers A-E, each of uniform thickness, resulting from the constant speed of the apparatus along each of the succeeding paths. None of the

paths would have the deposited material sloping in the direction between the beginning and ending ends of the paths as is required in claims 1 and 15.

It is respectfully submitted that Hunter, Jr. '766 does not disclose a method or apparatus by which foamed plastic material is deposited on an underlying surface for the deposited material to slope uniformly relative to the surface along at least a portion of the path in the direction between the beginning and ending ends of the path. Accordingly, it is further respectfully submitted that appellant's independent claims 1 and 15 are patentable under 35 U.S.C. § 102(b) over Hunter, Jr. '766, together with claims 2-14 which are dependant from claim 1 and claims 16-29 which are dependent from claim 15. Therefore, the examiner's decision finally rejecting these claims should be reversed.

B. Dependent Claims 3, 8 and 14 are Separately Patentable from Claim 1

Claims 3 and 8 are dependent from and add to claim 1 that appellant's moving means includes a variable speed drive motor and that the control means includes means for progressively changing the speed of the drive motor during movement of the support means along said portion of the path and which movement according to claim 1 is between the beginning and ending ends of the path. The speed of the drive motor in Hunter, Jr. '766 is not changed during movement of his apparatus from the beginning end to the ending end of the path of movement. It is respectfully submitted that this feature provides versatility to appellant's apparatus by which many sloping profiles can be laid, including those shown in Figures 6-9 and, therefore, provides patentable distinction from parent claim 1.

Claim 14 depends from and adds to claim 1 that appellant's moving means includes a variable speed drive motor and that the control means includes means for

selectively, progressively increasing, progressively decreasing, and maintaining a uniform speed for the drive motor during movement of the support means along the path and which movement, in accordance with claim 1 is between the beginning and ending ends of the path. Again, Hunter, Jr. '766 does not disclose this feature, and it is respectfully submitted that the latter provides patentable distinction from parent claim 1 for the same reason set forth with regard to claims 3 and 8.

C. Dependent Claim 18 is Separately Patentable from Claim 15

Method claim 18 adds to parent claim 15 the step of selectively controlling the depositing of the material for the latter to either progressively increase or decrease in thickness from the starting end of the path to a location between the starting end and the stopping end of the path and to be deposited from the location to the stopping end at the other of the increasing or decreasing thickness. This advantageously enables laying the material in the profiles of Figures 7 and 8 of the application drawing, selectively and in a single depositing operation, thus making the operation efficient and cost effective. This step is not disclosed in Hunter, Jr. '766 and provides patentable distinction from parent claim 15.

VIII. CONCLUSION

For the foregoing reasons, it is respectfully submitted that claims 3, 8, 14, and 18 further patentably distinguish under 35 U.S.C. § 102(b) over Hunter, Jr., '766.

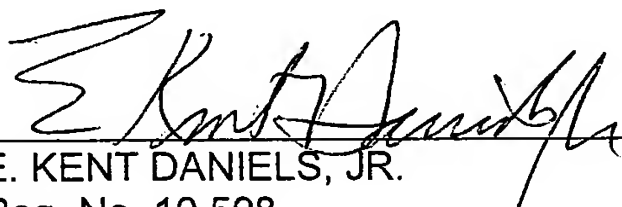
For all of the reasons discussed hereinabove, it is respectfully submitted that claims 1-29 on appeal patentably distinguish under 35 U.S.C. § 102(b) from Hunter, Jr. '766 relied upon by the examiner in the final rejection. Accordingly,

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reversal of the examiner's decision finally rejecting claims 1-29, and a finding of patentability with respect to these claims is in order and is respectfully requested.

Respectfully submitted,

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MINNICH & McKEE, LLP

  
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Filed: July \_\_, 2005

CLAIMS APPENDIX

CLAIMS INVOLVED IN THE APPEAL:

1. In apparatus comprising depositing means for depositing a layer of foamed plastic material on an underlying roof surface along a path having a beginning end and an ending end, support means for supporting said depositing means for movement on said underlying surface along said path, moving means for moving said support means along said path, and control means for controlling said moving means, the improvement comprising: said control means including means controlling said moving means for varying the rate of movement of said support means along said path for a layer of foamed plastic material deposited on said underlying surface to slope uniformly relative thereto along at least a portion of said path between said beginning end and said ending end.
2. Apparatus according to claim 1, wherein said moving means includes an electric drive motor.
3. Apparatus according to claim 1, wherein said moving means includes a variable speed drive motor and said control means includes means for progressively changing the speed of said motor during movement of said support means along said portion of said path.
4. Apparatus according to claim 3, wherein said means for progressively changing the speed of said motor progressively increases the speed thereof.

5. Apparatus according to claim 3, wherein said means for progressively changing the speed of said motor progressively decreases the speed thereof.

6. Apparatus according to claim 3, wherein said means for progressively changing the speed of said motor includes means for, selectively, progressively increasing and progressively decreasing the speed thereof.

7. Apparatus according to claim 1, wherein said support means includes a plurality of wheels and said moving means includes an electric motor for driving at least one of said wheels.

8. Apparatus according to claim 7, wherein said moving means includes a variable speed drive motor and said control means includes means for progressively changing the speed of said motor during movement of said support means along said portion of said path.

9. Apparatus according to claim 8, wherein said means for progressively changing the speed of said motor includes means for, selectively, progressively increasing and progressively decreasing the speed thereof.

10. Apparatus according to claim 8, wherein said means for progressively changing the speed of said motor progressively increases the speed thereof.

11. Apparatus according to claim 8, wherein said means for progressively changing the speed of said motor progressively decreases the speed thereof.

12. Apparatus according to claim 8, wherein said depositing means includes a foam material dispenser and means for displacing said dispenser relative to said support means in laterally opposite directions relative to said path.

13. Apparatus according to claim 12, wherein said means for progressively changing the speed of said motor includes means for, selectively, progressively increasing and progressively decreasing the speed thereof.

14. Apparatus according to claim 1, wherein said moving means includes a variable speed drive motor and said control means includes means for, selectively, progressively increasing, progressively decreasing, and maintaining a uniform speed for said motor during movement of said support means along said path.

15. A method of applying a layer of foamed plastic material on an underlying roof surface along a path having a beginning end and an ending end, comprising depositing foamed plastic material on said surface in the direction from said beginning end toward said ending end, and controlling the depositing of material for the deposited material to slope uniformly relative to said surface along at least a portion of said path between said beginning end and said ending end.



16. The method according to claim 15, and controlling the depositing for said material to progressively increase in thickness relative to said surface along said portion of said path.

17. The method according to claim 15, and controlling the depositing for said material to progressively decrease in thickness relative to said surface along said portion of said path.

18. The method according to claim 15, wherein said portion of said path has a starting end and a stopping end, and controlling the depositing for said material, selectively, to one of progressively increase in thickness and progressively decrease in thickness from said starting end to a location between said starting end and said stopping end and then to the other of progressively increase in thickness and progressively decrease in thickness from said location to said stopping end.

19. The method according to claim 18, and controlling the depositing for said material to progressively increase in thickness from said starting end to said location.

20. The method according to claim 18, and controlling the depositing for said material to progressively decrease in thickness from said starting end to said location.

21. The method according to claim 15, and controlling the depositing of material for the material to have a uniform thickness relative to said surface along another portion of said path.

22. The method according to claim 15, including the further steps of providing a spray applicator for said foamed plastic material, moving said spray applicator along said path in the direction from said beginning end toward said ending end, and reciprocating said applicator in laterally opposite directions relative to said path during said moving.

23. The method according to claim 22, wherein said spray applicator is on a wheeled support including a variable speed motor for moving the support along said path, and varying the speed of said motor during movement of said support along said portion of said path.

24. The method according to claim 23, and, selectively, one of increasing and decreasing the speed of the motor during movement of said support along said portion of said path.

25. The method according to claim 24, and the other of increasing and decreasing the speed of the motor during movement of said support along another portion of said path.

26. The method according to claim 25, and maintaining a uniform speed of said motor during movement of said support along a further portion of said path.

27. The method according to claim 23, wherein said portion of said path is a first portion, and maintaining a uniform speed of said motor during movement of said support along a second portion of said path.

28. The method according to claim 27, and varying the speed of said motor during movement of said support along a third portion of said path.

29. The method according to claim 15, wherein said portion of said path has a starting end and a stopping end, and controlling the depositing for said material, selectively, to one of progressively increase in thickness, progressively decrease in thickness, and be of uniform thickness from said starting end to said stopping end.

EVIDENCE APPENDIX

A copy of each of the following items of evidence relied on by the Appellant is attached:

1. A Declaration Pursuant to 37 CFR §1.132 filed November 1, 2004. By an Advisory Action dated December 1, 2004, the examiner advised that the Affidavit was considered.

Serial No. 10/055,085

Docket No. XEEE 2 13215

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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For : Apparatus for Applying  
Foam Material to a Substrate  
Serial No. : 10/055,085  
Filing Date : January 25, 2002  
Gr. Art Unit : 3752  
Examiner : Robin Octavia Evans  
Our Docket : XEEE 2 13215

DECLARATION PURSUANT TO 37 C.F.R. § 1.132

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Dear Sir:

I, Richard A. West, declare as follows:

1. I am the inventor of the subject matter of the above-identified patent application.
2. I am familiar with the structure and operation of the apparatus disclosed in U.S.

Patent 6,126,766 to Hunter, Jr. for depositing layers of foamed plastic material on an underlying roof surface.

3. I was aware of the structure and operation of the apparatus disclosed in the foregoing patent to Hunter, Jr. prior to the filing of my patent application, as is evidenced by the disclosure and

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Nancy M. Grams  
(TYPED OR PRINTED NAME OF SENDER)  
Nancy M. Grams  
(SIGNATURE)

description of U.S. Patent No. 6,024,147 to Hunter, Jr. in the specification of my patent application, the cited Hunter, Jr. patent having issued from a divisional application of the '147 patent.

4. I have personally observed the operation of the Hunter, Jr. apparatus in depositing layers of foam plastic material on a roof surface.

5. In the operation of the Hunter, Jr. apparatus, and with reference to Figure 6 of the cited '766 patent, the apparatus does not travel along the roof surface 61 in the direction from point A to point E. Rather, the apparatus travels along paths A-E, each of which is perpendicular to the plane of the sheet on which Figure 6 appears and each of which paths has a beginning end and an ending end. The Hunter, Jr. apparatus is moved along path A from the beginning end to the ending end at a first constant speed to deposit a first strip of foam which is of the same first thickness from beginning to end. The apparatus is then shifted laterally to the position of path B and is moved along path B from the beginning end to the ending end at a second constant speed, which is less than the first speed, to deposit a second strip of foam which is thicker than the first strip and which is of the same second thickness from beginning to end. The apparatus is then shifted laterally and sequentially to the positions of paths C, D and E, and is operated along each path as described above and at a constant speed along each path which is less than the constant speed for the preceding path. When completed, the deposited foam surface is stepped, or terraced, as shown in Figure 6 of Hunter, Jr.

6. The speed of the Hunter, Jr. apparatus does not change during movement of the apparatus from the beginning to the ending end of the paths A-E.

7. The Hunter, Jr. apparatus cannot be operated to deposit a layer of foamed plastic material along a path on an underlying surface for the layer of material to slope uniformly in the direction between the beginning and ending ends of the path.

8. In contrast to the operation of the Hunter, Jr. apparatus, the apparatus of my invention includes a programmable controller by which the motor that moves the apparatus can be controlled to enable depositing a layer of foamed plastic material along a path having beginning and ending ends for the layer of material to slope upwardly or downwardly along the path in the direction between the beginning and ending ends, depending on the initial speed of the apparatus. The speed of movement of the apparatus progressively increases as the apparatus moves toward the ending end of the path for the layer of material to slope downwardly along the path, or the speed progressively decreases for the layer of material to slope upwardly along the path.

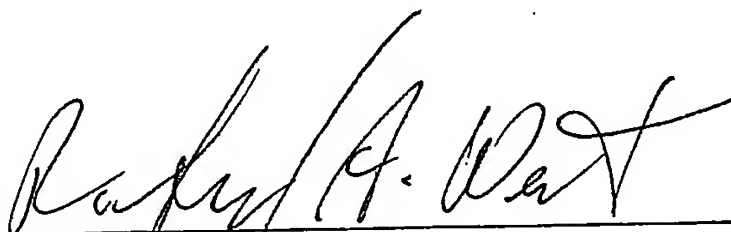
9. Prior to my invention, and as is set forth in the specification of my application, the only way to provide a flat roof surface with a sloping contour was to attach manufactured tapered insulation boards to the roof surface and then cover the boards with a waterproofing membrane. This is a labor intensive and expensive procedure. The alternative provided in accordance with the cited Hunter, Jr. patent is a terraced contour of adjacent flat surfaces of different thicknesses which create the potential for the undesired standing or ponding of water on the flat surfaces.

10. My invention advantageously enables providing a flat roof surface with a sloping profile more efficiently and less expensively than heretofore possible, while providing the advantages of a sloping surface including constant runoff of water and elimination or reducing of ponding.

Serial No. 10/055,085

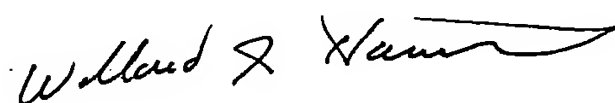
Docket No. XEEE 2 13215

11. I further declare that all statement made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-referenced application or any patent issuing thereon.

  
Richard A. West

Date: Oct. 28, 2004

*Sworn & Signed before me this 28th day Oct October 2004.*



WILLARD J. HARRISON  
NOTARY PUBLIC, STATE OF OHIO  
MY COMMISSION EXPIRES MAY 4, 2005